Attachment 1
ERM Corporate Profile

ERM PROFILE

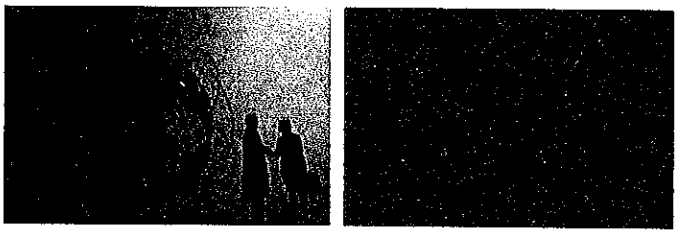
Founded in 1977, Environmental Resources Management (ERM) has been a leading global provider of environmental, health, safety, risk, social consulting services and sustainability related services for over 35 years and is currently the worlds largest dedicated environmental consultancy, with over 5,000 employees located in 150 offices in over 40 countries and territories around the world. Over the past three years, ERM has worked for more than 50 percent of the Global Fortune 500 delivering innovative solutions for business and selected government clients and helping them understand and manage the sustainability challenges that the world is increasingly facing.

One of ERM's largest offices is in Annapolis, MD, which has been serving clients in the mid-Atlantic region and especially the Baltimore metropolitan area since 1984. Since ERM's inception in 1977, the practice of assessing and cleaning up contaminated sites has been the hallmark of ERM's business. ERM has successfully completed over 1,000 remediation projects nationwide, including over 200 Superfund National Priorities List (NPL) site projects across the country, including more than 50 in USEPA Region III (which includes Maryland). Our successful remediation projects also have included numerous sites under RCRA authority, State-lead voluntary cleanup sites, and sites impacted by petroleum releases, similar to the Sykesville Oil Site.

Professional Profiles for ERM's key personnel working on the Sykesville Oil Site project are attached.

Gary L. Walters, CHMM

Principal



Mr. Gary Walters has 30 years of experience in environmental engineering, with an emphasis in hazardous waste management and remediation, and water/wastewater treatment. Gary is a Senior Project Director within ERM's site remediation practice area and a partner of the firm. In addition, he manages the engineering group in ERM's Annapolis, MD office. In these capacities he has managed or provided technical direction for over 100 state or federal (NPL) Superfund sites or RCRA Corrective Action sites, and specializes in strategic planning, investigative scoping, and the remedy selection process prescribed in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) as well as the RCRA Corrective Action Process. As manager of ERM's engineering practice in the Annapolis office, he provides technical direction and oversight for a staff of 10 multi-disciplined engineers in the conduct of a wide variety of engineering projects. Currently, Gary is also the practice lead for ERM's Transaction Services Practice within the Mid-Atlantic Region.

Gary has extensive experience with the DOD and DOE environmental restoration programs and HTRW management and remediation. He was a senior manager within the Army's Superfund Program (IRP) for over six years, with oversight responsibility for environmental restoration activities at 30 Army installations, many of which were on or proposed for inclusion on the NPL. He has diverse engineering experience related to site remediation feasibility studies, remedial design/remedial action implementation and water supply, and water and wastewater treatment.

Fields of Competence

- Hazardous Waste Site Investigation and Remediation
- Environmental Compliance Audits
- Environmental Due Diligence
- Water and Wastewater Treatment
- DOD Superfund (IRP) Programs
- Hazardous Waste Management
- Brownfields/Environmental Engineering

Credentials

- M.S., Civil Engineering (Environmental Engineering option), University of Maryland, 1982
- B.A., Cum Laude Biology/Chemistry, Western Maryland College, 1977
- Courses in Environmental Laws & Regulations (Government Institutes, 1989), and Ground Water Pollution & Hydrology (Princeton Associates, 1985) OSHA 1910.120 Certified

Professional Affiliations

- Certified Hazardous Materials Manager (CHMM) (Master Level)
- American Society of Civil Engineering
- Water Environment Federation
- Member of Advisory Board for Johns Hopkins University Graduate School for Environmental Engineering

Key Projects

Managed all RD/RA activities at a former wood-preserving facility on the NPL within EPA Region III. Final remedy consisted primarily of capping in place the surface soils which had been contaminated by chromated copper arsenate (CCA). All RD/RA activities were completed in less than two years and project is now in long-term monitoring to support EPA's 5-year review and possible delisting.

Project Director for highest-ranking State of Pennsylvania Superfund Site, which was a former solvent recycling facility located between York and Harrisburg, PA. Coordinated and oversaw the characterization and disposition of over 6,000 drums and 200 bulk storage tanks of liquid waste. Managed the RI/FS which resulted in a final remedy costing just over $1MM, whereas original projects by State of Pennsylvania estimated cleanup costs to be over $40MM. Coordinated and interacted with a PRP Steering Committee representing over 1,000 PRPs, as well as PADEP throughout seven-year project.

Baltimore City Superfund Site Project Manager for remedial investigation/feasibility study (RI/FS) for former herbicide/pesticide manufacturing plant currently owned by the City of Baltimore. Property is a State of Maryland Superfund Site and the project has entailed extensive negotiations with MDE, other potentially responsible parties (PRPs) and community relations activities.

Managed expanded site inspection (ESI) and removal action for PCB-contaminated media at Navy CHESDIV's David Taylor Research Center (DTRC) in Montgomery County, Maryland. Project involved extensive sampling and analysis at 10 waste sites and preparation of an engineering evaluation and cost analysis (EE/CA) for a PCB removal action. Also assisted in the organization of the facility's Technical Review Committee (TRC) and routinely served as technical leader for TRC/RAB meetings.

As a result of favorable reviews received for its work during the ESI and PCB removal action, ERM was retained via sole source contract arrangements to provide a variety of services directly to various DTRC facilities. Manager for all environmental support to the DTRC, including the development of a plan for characterizing 33 drums of field-generated wastes (i.e., drill cuttings and well development water). ERM used existing analytical data to determine that none of these wastes could be RCRA characteristic hazardous waste and thereby eliminated the need for any additional sampling and analysis. ERM then coordinated the disposal of the liquid wastes with the local POTW; solid wastes were disposed off-site as non-hazardous waste.

Project Director for NPL Superfund site in Bucks County, Pennsylvania involving TCE contamination of a sole-source acquifer used for potable water supply for Dublin Borough. Managed successful completion of the RI, Baseline Risk Assessment and FS. Along with outside counsel, negotiated ROD with EPA Region 3, and currently coordinating and overseeing implementation of the final site remedy, which involves use of in-situ chemical oxidation of contaminated source area, and monitored natural attenuation (MNA) of off-site dissolved-phase plume.

Managed environmental investigations at three Army bases in the Baltimore-Washington Metropolitan area, performed in response to the Community Environmental Response Facilitation Act (CERFA). Studies documented environmental conditions at the facilities and identified land parcels suitable for immediate transfer under the Army's BRAC program because they have not been adversely impacted.

Project Manager for project that entailed completing 28 Phase I ESAs at properties in the United States, South America, and Europe in one week. Coordinated all site visits, preparation of draft final reports, addressed outside council's comments on all draft reports,

produced multiple copies of all final reports and delivered to client in seven days to facilitate billion dollar transaction.

Performed numerous environmental due diligence assessments and HS&E compliance audits at a wide array of industrial facilities. Due diligence assessments were performed within the context of ASTM Standard E1527. HS&E audits focus on compliance with all major federal HS&E statutes and regulations, including Clean Water Act (CWA), Clean Air Act, RCRA, TSCA, and OSHA.

Deposed and/or testified as expert witness on State of Maryland and Federal Superfund projects. Also performed peer reviews of numerous RI/FS projects, including Federal and State of Maryland Superfund Sites.

Managed the U.S. Army's Superfund program (IRP) at numerous Army properties, with studies ranging from preliminary assessments/site inspections (PA/SI), through remedial investigations/feasibility studies (RI/FS) and remedial actions. Prepared technical scopes of work, cost estimates, sampling and analysis plans, and technical reports. Maintained familiarity with environmental regulations and interfaced with all levels of DoD personnel and regulatory agencies.

Managed all on-site support services, provided to Westinghouse Materials Company of Ohio (WMCO) and DOE at the Feed Materials Production Center (FMPC) in Fernald, OH. Services included: RCRA Parts A and B application support; RCRA training; engineering evaluations of hazardous waste management units (HWMU), and solid waste management units (SWMU); and extensive regulatory analysis.

Managed the environmental review phase (Phase II) of a licensing procedure before the Maryland Public Service Commission for a proposed 230 MW Non-Utility Generator Cogeneration Facility. Also provided lead engineering support to client for two of the more contentious aspects of the case: 1) use of treated wastewater for cooling water; and 2) design and safety issues associated with the facility's natural gas pipeline. Provided expert testimony to support engineering findings.

Managed RI/FS activities at two State of Maryland Superfund sites, both involving VOC contamination in soils and ground water. Also assisted in the design, installation and operation of an interim remedial measure (IRM) consisting of a dual vacuum extraction system designed to treat source area contamination at both sites.

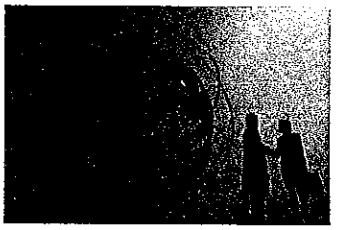
Project Manager for preliminary assessments (PA) at National Guard Bureau (NCB) facilities in the Mid-Atlantic region under an IDO contract with the U.S. Army Environmental Center (AEC). Projects involved detailed on-site site visits, review of Army, NGB, and state and federal regulatory agency files, and preparation of narrative reports in accordance with EPA guidance for PAs. NGB facilities investigated included those located at Anacostia Naval Air Station in Washington, D.C. and Ft. Belvoir in northern Virginia.

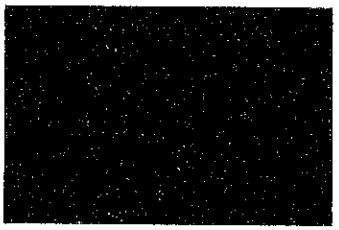
Publications

- "Superfund Remedy Selection - Still Evolving, Still Improving." Shepard's Expert and Scientific Quarterly. Summer 1994.
- "Enhancing Public Relations in the DOD Superfund Process." ADPA Annual Conference.
- "Managing Industrial Pretreatment Sludges in the Solid Waste Management System." Mid-Atlantic Industrial Waste Conference.
- Co-authored numerous technical reports related to site remediation water quality evaluations.

Matthew W. Erbe, P.G.

Senior Hydrogeologist





Mr. Matthew Erbe is a Senior Consultant based in Annapolis, Maryland. He has over 17 years of experience in the fields of contaminated site management and hydrogeology. Mr. Erbe has supported many multi-disciplinary environmental projects throughout the Mid Atlantic specializing in site investigation and risk evaluation.

He is thoroughly familiar with the regulatory requirements for site characterization, risk evaluation, cleanup and closure for EPA CERCLA, RCRA Corrective Action and Facility Lead programs as well as the Maryland State Superfund, Voluntary Cleanup, Solid Waste, and Oil Control Programs; Pennsylvania ACT 2 Program; and West Virginia Voluntary Remediation Program (VRP). His consulting project work has included contaminated site investigations at chemical and manufactured gas plants, evaluation of corrective measures for soil and groundwater impacts, groundwater flow and contaminant transport modeling; coal combustion product beneficial use and leachate impact analysis; and groundwater resource and supply analysis in the US, Carribean and Europe.

Professional Affiliations & Registrations

- Professional Geologist, State of Tennessee

Education & Training

- MS, Hydrogeology, Syracuse University, 1997
- BS, Natural Sciences - Geology, Towson State University, 1995
- NGWA Seminars – Fundamentals of Ground Water Geochemistry, Geochemical Modeling of Aqueous Systems
- Advanced Ground Water Modeling Workshop
- 40-Hour OSHA Health and Safety Training for Hazardous Material Operations and Emergency Response, Current on Annual 8-Hour Update

Publications

- Erbe, M., and J. Ryan, "Use of In-situ Bioventing to Mitigate Diesel Range Petroleum Hydrocarbons in Saprolite", **paper presented** at the Battelle Ninth International In-Situ and On-Site Bioremediation Symposium, Baltimore, MD, 2007.
- Erbe, M., "Evaluation of Water Quality Conditions Associated with the Use of Coal Combustion Products for Highway Embankments", **talk given at** the 2005 EPA Region III By-Products Symposium, Philadelphia, PA, 2005.
- Erbe, M., R. Keating, C. Travers, L. Norman, W. Cutler, and T. Martin, "Assessing the Role of Structural Elements in Aquifer Hydraulics and Plume Management", **talk and paper presented at** U.S. EPA/NGWA Fractured Rock Conference Proceedings, Portland, Maine, 2004.
- Erbe, M.W. and D.I. Siegel, "Using Ternary Diagrams to Characterize the Natural Attenuation of Chlorinated Ethenes in Ground Water", **published in** *Journal of Environmental Hydrology*, Vol. 9. March 2001.

Key Projects

68th Street Landfill Superfund Site, Rosedale, Maryland. (USEPA Region III Superfund/MDE State Superfund). Remedial Investigation Task Manager overseeing the remedial investigation of a 270-acre property containing multiple former landfills and five USEPA-designated "source areas," as well as sensitive environmental features such as streams, wetlands, and floodplains. The investigation approach incorporates human health and ecological risk assessments as well as the future redevelopment of areas of site.

Annapolis, Maryland. Alliant Techsystems. (MDE CHS Enforcement Division) Completed a remedial alternatives analysis of measures to eliminate the potential for off-site migration of ground water plume and reduce the residual contaminant mass to reduce client's long-term liabilities and financial obligations associated with the site.

Millersville Landfill, Maryland. Anne Arundel County DPW. (MDE Waste Management Administration) Project Manager and Hydrogeologist overseeing the development of the Assessment of Corrective Measures for impacts to ground water, replacement of residential supply wells, hydrogeologic investigation of seeps to support landfill cells design, and risk assessments.

Sykesville Oil Site, Maryland. (USEPA Region III Hazardous Sites Cleanup Division) Managed the investigation and remediation of a release from a 10,000-gallon diesel fuel above-ground storage tank (AST) that entered the saprolite and bedrock aquifers. Prepared the design and installation of an in-situ bioventing remedy to reduce hydrocarbon concentrations to a risk tolerable level. Work was performed under a a Consent Order with USEPA Region III and was completed in 2014.

Groundwater Investigation, FMC Avtex Fibers Superfund Site in Front Royal, Virginia. (USEPA Region III Superfund) Project Manager and Senior Hydrogeologist for a deep bedrock aquifer (DBA) investigation and closure of several former basins at the site. The project required installation of multiple deep groundwater monitoring wells using conventional and multi-level systems, ambient ground water and river level monitoring, conduct of single and multi-well pumping tests in fractured shale, and preparation of a dense aqueous phase liquid (DAPL) flow and transport model to evaluate the role of structural geologic elements in plume migration and aquifer hydraulics..

Site Investigation, Hagerstown, Maryland. NiSource. (MDE CHS Enforcement Div.) Project Manager for the site characterization and pilot test to charactierize and remediate residuals (BTEX and PAHs) at a former manufactured gas plant. Investigation activities are being conducted to improve the understanding of the hydraulic flow regime within the bedrock aquifer, direct-push and split-spoon sampling, soil gas sampling, overburden and bedrock well installation, implementation of a pilot test using sodium persulfate and calcium peroxide to reduce residual contamination.

5601 Eastern Avenue, Baltimore, Maryland. (MD VCP/USEPA Facility Lead Program). Managed the site characterization and risk assessment for a 19 acre property in support of redevelopment. The facility included manufacturing area and uncontrolled industrial landfill, as well as sensitive environmental features such as streams. The investigation approach incorporates human health and ecological risk assessments as well as the future redevelopment of areas of site.

BBSS Mine Site, Crofton, Maryland. (MD PPRP / Waste Management Administration) Principal Investigator for the evaluation of impacts to groundwater quality resulting from the use of fly ash reclaimed sand and gravel mine. Used statistical analysis of metals concentration data collected from monitoring wells and residential water supply wells both adjacent to the mine site and the surrounding communities.

CREO Manufacturing Plan, Middleway, West Virginia. Kodak. (WV DEP) Senior Hydrogeologist responsible for evaluating remedial technologies to reduce source concentrations of trichloroethylene in the ground water within a karst aquifer system. Leading technologies being evaluated include electric resistance and radio frequency heating, bio augmentation, and dual-phase extraction with vapor extraction.

Dresser Inc. Facility, Salisbury, Maryland. (USEPA Region III) Senior Hydrogeologist for the characterization of environmental conditions to support the corrective action process under RCRA and for the remediation of PCBs found in soils and hexavalent chromium in soil and ground water.